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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,563	03/23/2001	Shunpei Yamazaki	SEL 248	9704

7590 03/10/2003

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 03/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/815,563

Applicant(s)

YAMAZAKI ET AL.

Examiner

Peter J Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☒ Claim(s) 1,7 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 30 January 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The reply filed on January 30, 2003 consists of changes to the specification, drawings, and to the claims, and further, the reply consists of remarks related to the prior rejection of claims in the First Office Action. However, claims 1-29 are not allowable as explained below.

Specification

2. The amendments to the specification have been entered and considered.

Drawings

3. The corrected or substitute drawings were received on January 30, 2003. These drawings are **not accepted**. Figures 1A-1C are still not clear. For example, it is extremely difficult to decipher the relationship between figures 1A and figures 1B-C. Further, the section line B-B' does not cut through either the cathode 107 or the EL layer 106 in figure 1A. However, figure 1C indicates that both the EL layer and the cathode are on the insulator 101. The Examiner recommends adding a new figure in an isometric view of the invention. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

4. Claims 1, 7, and 13 are objected to because of the following informalities: The limitation "...wirings formed in contact with portions in each of the anodes..." is unclear. The Examiner is

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interpreting the limitation to read, "...wirings formed in contact with portions of each of the anodes..." Further, claim 7 recites the limitation "...between said wrings and said luminescent materials..." The Examiner is interpreting "wring" to be a typographical error of --wirings--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-4, 7-10, 13-16, and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murayama et al (USPN 5,227,252; henceforth "Murayama") in view of Zeto et al (USPN 5,163,220; henceforth "Zeto").

In regards to claims 1-4, 7-10, 13-16, and 19-24 Murayama discloses in figure 1, an organic EL element having an insulator (6), anodes (2) formed on the insulator, cathodes (1) formed over the insulator, and luminescent material (3) interposed between the anodes and cathodes.

Murayama is silent to the auxiliary wiring connecting the anodes.

However, Zeto teaches in figure 1, an insulator (10), anodes (12) formed on the insulator in a form of stripes extending in a first direction, wirings (16) formed in contact with portions of each of the anodes and extending in the first direction, and an insulating layer (14) formed between the wirings and the luminescent material. Zeto further teaches in column 3 lines 17-21 and column 5 lines 11-12, that the anodes (12) are formed from ITO film and the wirings (16) are formed from silver. Further, in column 1 lines 62-column 2 line 10, that this anode configuration improves many aspects of the EL device, including brightness uniformity and allows for larger EL devices. Further, manufacturing methods for this type of device are known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the EL device of Murayama, including Zeto's anode configuration, since Zeto teaches this anode configuration improves many aspects of the EL device, including brightness uniformity and allows for larger EL devices.

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the method recited by the Applicant to construct the EL device of Murayama, including Zeto's anode configuration, since manufacturing methods for this type of device are known in the art.

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7. Claims 5-6, 11-12, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murayama et al (USPN 5,227,252; henceforth "Murayama") in view of Zeto et al (USPN 5,163,220; henceforth "Zeto") in view of Yudasaka et al. (USPN 6,359,606; henceforth "Yudasaka").

In regards to claims 5, 6, 11, 12, 17, and 18, Murayama and Zeto teach all the limitations recited in claims 1, 7, and 13 (above).

Murayama teaches in figure 2 that a voltage source uses the EL device.

Both Murayama and Zeto are silent to the anodes and cathodes electrically connected to a driver circuit formed on the substrate made of glass.

However, Yudasaka teaches in column 7, lines 63-67, and figure 1, 3, that the anodes are electrically connected to a data drive circuit, and the cathodes are electrically connected to the scanning side drive circuit, and both drive circuits are formed in a peripheral area of the substrate. Yudasaka further teaches in columns 7 and 8, lines 63-67 and 1-13, when the driver circuit of the light-emitting device is formed on the substrate, it becomes possible to wire the drive circuits to the electrodes in such a way that reduces the load on the drive circuits.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the EL device of Murayama with the anodes of Zeto including the driver circuit of Yudasaka, since Yudasaka teaches that this configuration reduces power consumption and also allows for a quicker display.

In regards to claims 25-29, Murayama and Zeto teach all the limitations recited in claims 1, 7, 13, 19, and 22 (above).

Both Murayama and Zeto are silent to a plurality of banks being arranged in a form of stripes extending in a second direction or a method to produce the banks.

However, Yudasaka teaches in figures 3A-3C and column 2 lines 50-54, that banks are arranged orthogonal to the anodes, and this configuration provides an active matrix display device capable of protecting a thin film luminescent element from moisture, etc. by means of a simple structure. Further, a method to manufacture this device is known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the EL device of Murayama with the anodes of Zeto including the bank structure of Yudasaka, since Yudasaka teaches that this configuration provides an active matrix display device capable of protecting a thin film luminescent element from moisture, etc. by means of a simple structure

Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the method recited by the Applicant to construct the EL device of Murayama, including Zeto's anode configuration and Yudasaka's bank structure, since manufacturing methods for this type of device are well known in the art.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 7, 13, 19, and 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 6,320,311 to Nakaya et al; 5,400,047 to Beesely; and 5,399,936 to Namiki et al all disclose an organic EL device having a plate/strip like lower resistance contact material to increase the brightness uniformity, which is extremely similar to Applicant's. However, this prior art is not relied upon in this office action.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

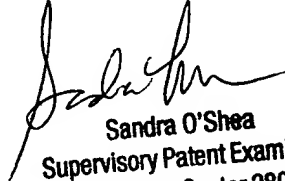
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198. The examiner can normally be reached on 7.30 - 4:30, M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm
March 3, 2003



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800